

## A new species of the genus *Callobius* (Araneae: Amaurobiidae) from Yakushima Island, Japan

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**Abstract** — A new species of the genus *Callobius* is described from Yakushima Island, Kyushu, Japan, under the name of *Callobius yakushimensis*. This species is characterized by having a long unique apophysis on the tibia of the male palp, and two linguiform lobes laterally in the epigynum.

**Key words** — Araneae, Amaurobiidae, *Callobius*, new species, Yakushima, Japan

### Introduction

The genus *Callobius*, with about thirty described species is mainly found in North America and only few species are known from the Palaearctic Region (Leech, 1972; Platnick, 2009). In Japan, a single species, *Callobius hokkaido* Leech 1971, was recorded from Hokkaido up to the present (Yaginuma, 1987; Platnick, 2009; Okumura, Ogata & Ono, 2009).

This genus is characterized by having three developed tibial apophyses of the male palp, especially a dorsal one elongate, and a pair of large lateral lobes of the epigynum (Chamberlin, 1947; Chamberlin & Ivie, 1947; Leech, 1972).

In this paper, I describe a new species of this genus collected from Yakushima Island located in the area between subtropical and temperate regions in Japan, under the name of *Callobius yakushimensis* n. sp.

The abbreviations used in this paper are as follows: ALE, anterior lateral eye; AME, anterior median eye; MOA, median ocular area; PLE, posterior lateral eye; PME, posterior median eye.

The type specimens of the new species described in this paper will be deposited in the collection of the Department of Zoology, National Museum of Nature and Science, Tokyo.

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### *Callobius yakushimensis* n. sp.

(Japanese name: Yakushima-gakejigumo)

Figs. 1–7

Types. All the type specimens were collected from Yakushima Is., Kagoshima Pref., Kyushu, Japan, by K.

Okumura. Holotype: ♂, Shiratani-unsuikyo, 700 m alt., January 3, 2008 (NSMT-Ar 8490). Paratypes: 1♂, same data as the holotype, (NSMT-Ar 8491), 1♀, Arakawa woodland path, 600 m alt., January 4, 2008 (NSMT-Ar 8492).

Description. Male (holotype). Measurements in mm. Total length 5.0; carapace 2.6 long, 1.8 wide; abdomen 2.4 long, 1.4 wide; sternum 1.2 long, 1.1 wide. Eye sizes: AME 0.09, ALE 0.11, PME 0.13, PLE 0.10. Distances between eyes: AME-AME 0.03, AME-ALE 0.06, PME-PME 0.13, PME-PLE 0.10, AME-PME 0.19, ALE-PLE 0.08. MOA: anterior width 0.21, posterior width 0.39, length 0.40. Leg measurements as shown in Table 1.

Cheliceral retromargin with five teeth.

Male palp (Figs. 1–3): cymbium triangular and retrolaterally extended, three developed apophysis on tibia, the dorsal one is especially long, slender and curved near the base of process.

Coloration: carapace grayish brown with indistinct radial flecks, dorsum of abdomen gray with indistinct yellowish brown chevrons, sternum grayish brown, chelicerae, maxillae and labium brown, legs grayish brown without ring flecks.

Female (one of paratypes). Measurements in mm. Total length 5.0; carapace 2.5 long, 1.5 wide; abdomen 2.5 long, 1.8 wide; sternum 1.2 long, 1.1 wide. Eye sizes: AME 0.08, ALE 0.13, PME 0.11, PLE 0.13. Distances between eyes: AME-AME 0.03, AME-ALE 0.06, PME-PME 0.11, PME-PLE 0.11, AME-PME 0.19, ALE-PLE 0.08. MOA: anterior width 0.19, posterior width 0.33, length 0.38. Leg measurements as shown in Table 1.

Cheliceral retromargin with five teeth.

Epigynum and internal genitalia (Figs. 4–5): epigynal lateral lobes large and linguiform, distantly from each other, median part between each lobe protuberated, spermathecae reniform, and agglutinated with copulatory duct.

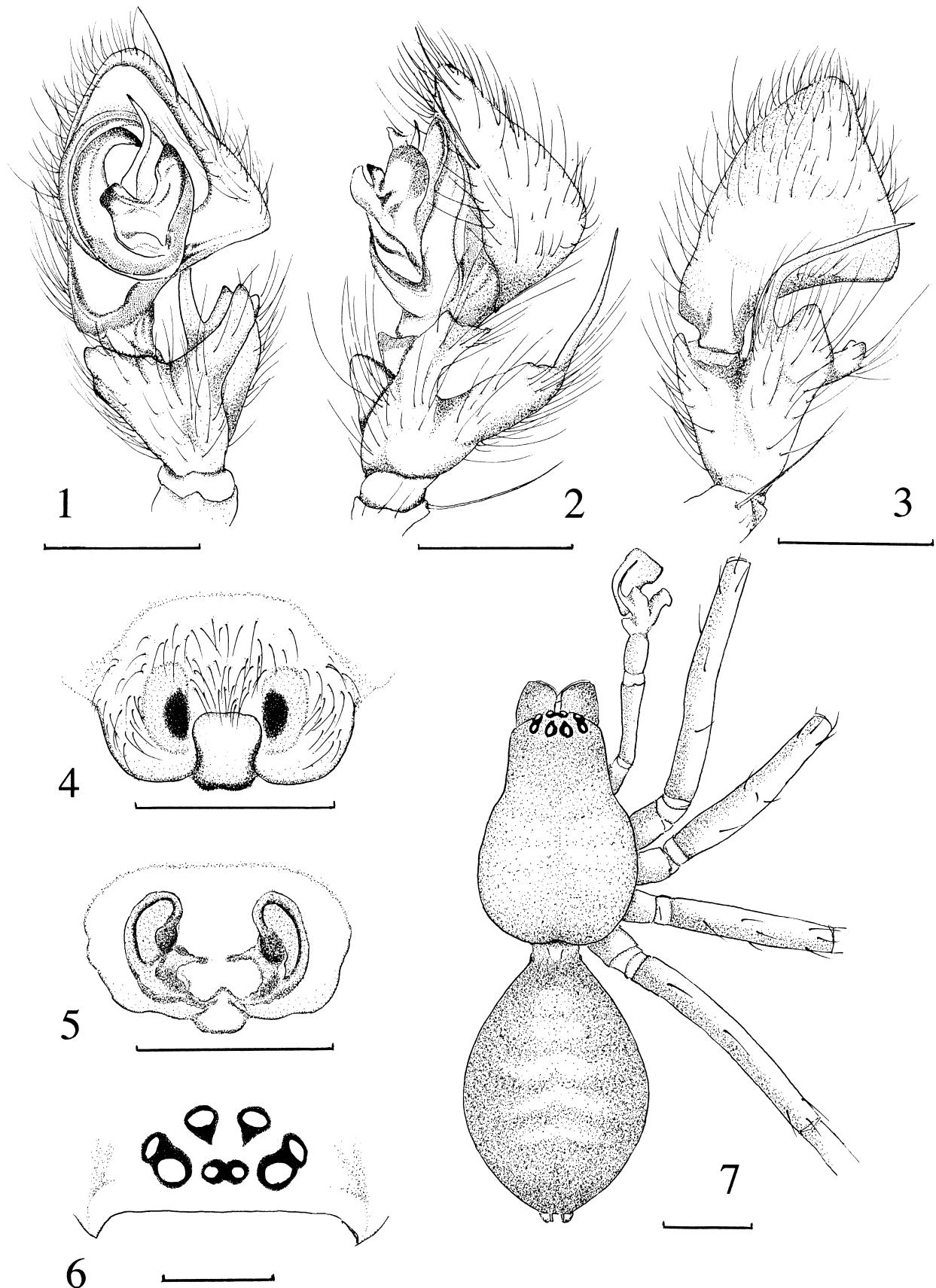


Fig. 1-7. *Callobius yakushimensis* n. sp. — 1, male palp, ventral view; 2, same, retrolateral view; 3, same, dorsal view; 4, epigynum; 5, internal female genitalia; 6, male ocular area; 7, male dorsal view. Scales: 0.5 mm (1-6), 1.0 mm (7).

**Table 1.** Leg measurements of *Callobius yakushimensis* (♂/♀, in mm).

Legs	Femur	Patella and tibia	Metatarsus	Tarsus	Total
I	3.05/2.38	3.95/2.90	3.08/1.90	1.80/1.23	11.88/8.41
II	2.43/1.98	2.93/2.28	2.00/1.53	1.28/1.03	8.64/6.82
III	2.15/1.68	2.45/1.95	1.88/1.45	1.05/0.80	7.53/5.88
IV	2.75/2.33	3.28/2.70	2.60/1.95	1.40/1.05	10.03/8.03

Coloration: almost same as in the male.

Distribution. Yakushima Is., Kagoshima Pref., Japan.

Etymology. Specific name is derived from the type locality.

Remarks. It is the first record of the genus *Callobius* from the area between subtropical and temperate zones of the Palaearctic Region, and the second record from Japan. The new species resembles *Callobius hokkaido* Leech 1971 in external features, but can be clearly distinguished from the latter species by the following points. In male palp, cymbium is extended retrolaterally in *C. yakushimensis*, but not extended, and roundish in *C. hokkaido*, and the basis of the tibial apophysis situated dorsally is quite thick in *C. yakushimensis*, but not thick in *C. hokkaido*. Epigynal lateral lobes distantly from each other in *C. yakushimensis*, but very closely in *C. hokkaido*.

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